



PATENT

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re : Application of Shan et al.
For : **HIGH PEAK-POWER KILOHERTZ LASER SYSTEM
EMPLOYING SINGLE-STAGE MULTI-PASS AMPLIFICATION**
Serial No. : 10/656,343
Filed : September 5, 2003
Priority Date Claimed :
Group Art Unit :
Examiner :
Our Docket No. : KSU-101US

September 26, 2003

COMMISSIONER FOR PATENTS

Mail Stop DD
Post Office Box 1450
Alexandria, Virginia 22313-1450

**INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. 1.97**

Sir:

The following information is disclosed in accordance with 37 C.F.R. 1.97.

The following patents, which are listed on the enclosed form PTO-1449 and submitted herewith in copy, are considered relevant prior art.

UNITED STATES PATENTS

<u>Patent No.</u>	<u>Patentee</u>	<u>Date</u>
6,384,966	Dymott	05/07/02
6,108,357	Unternahrer	08/22/00
5,172,263	Hale	12/15/92

OTHER DOCUMENTS

Spectra-Physics Mountain View, California HURRICANE Specifications (October 2001).

Positive Light Los Gatos, California Legend Sub-30 fs Ti:sapphire Amplifier (January 2003).

Positive Light, Inc. Los Gatos, California Technical Bulletin "Overcoming Challenges of Sub-30 fs Chirped Pulse Amplification (January 2003).

Spectra-Physics, Mountain View, California FEMTOPOSER COMPACT PRO Specifications (1997).

J. Squier et al, " 100-fs pulse generation and amplification in Ti:Al₂O₃", Optics Letters, 16, 324 (1991).

M. Lenzner et al, "Sub-20-fs, kilohertz-repetition-rate Ti:sapphire amplifier", Optics Letters, 20, 1397(1995).

Fu at al, "High-average-power kilohertz-repetition-rate sub-100fs Ti:sapphire system", Optics Letters, 712(1997).

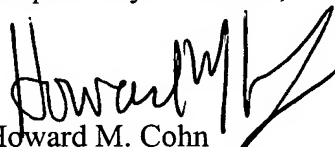
V. Bagnoud and F. Salin, "1.1 Terawatt, kilohertz femtosecond laser", in conference on Lasers and Electro-optics, 1999, Baltimore, IvID.

S. Sartania et al., "Generation of O.I-TW 5-fs optical pulse at a 1-kHz repetition rate", Opt. Lett. 22, 1562(1997): 1 stage amplifier: 1.5 mJ output / 10 mJ pump

Y. Jiang et al., "High-average-power 2-kHz laser for generation of ultrafast x-ray pulses", Opt. Lett. 27,963(2002): 3 stage amplifier, 2kHz: 1 -3uJ output / 1.5W pump; 2- 0.5 mJ output /11 W pump; 3 -14W output / 54W pump

Due consideration and allowance of this application are respectfully solicited.

Respectfully submitted,


Howard M. Cohn
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: **COMMISSIONER FOR PATENTS**, Arlington, Virginia on September 26, 2003.

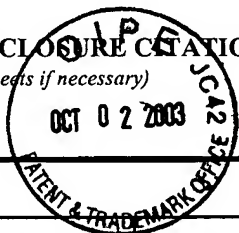
Name of Person mailing : Howard M. Cohn

Signature of Person mailing :

Date of Person signing : September 26, 2003

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)



Docket Number (Optional) KSU-101US		Application Number 10/656,343
Applicant(s) Shan et al.		
Filing Date 9/5/03	Group Art Unit	

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		6,384,966	05/07/02	Dymott			
		6,108,357	08/22/00	Unternahrer			
		5,172,263	12/15/92	Hale			

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	✓	Spectra-Physics Mountain View, California HURRICANE Specifications (Oct. 2001)
		Positive Light Los Gatos, California Legend Sub-30 fs Ti:sapphire Amplifier (Jan. 2003)

? NOT INDEXED

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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✓	Positive Light, Inc. Los Gatos, California Technical Bulletin "Overcoming Challenges of Sub-30 fs Chirped Pulse Amplification" (Jan. 2003)
✓	Spectra-Physics, Mountain View, California FEMTOPOWER COMPACT PRO Specifications (1997)
✓	J. Squier et al, " 100-fs pulse generation and amplification in Ti:Al2O3", Optics Letters, 16, 324 (1991).
✓	M. Lenzner et al, "Sub-20-fs, kilohertz-repetition-rate Ti:sapphire amplifier", Optics Letters, 20, 1397(1995)
/	Fu et al, "High-average-power kilohertz-repetition-rate sub-100fs Ti:sapphire system", Optics Letters, 712(1997)
/	V. Bagnoud and F. Salin, "1.1 Terawatt, kilohertz femtosecond laser", in conference on Lasers and Electro-optics, 1999, Baltimore, IvID
✓	S. Sartania et al., "Generation of O.I-TW 5-fs optical pulse at a 1-kHz repetition rate", Opt. Lett. 22, 1562(1997): 1 stage amplifier: 1.5 mJ output / 10 mJ pump
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